

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference LW8032PC		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR 2003/001303	International filing date (day/month/year) 3 July 2003 (03.07.2003)	Priority Date (day/month/year) 4 July 2002 (04.07.2002)	
International Patent Classification (IPC) or national classification and IPC IPC <sup>7</sup> : G02F 1/13357, G02B 6/00			
Applicant SAMSUNG ELECTRONICS CO LTD			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p> <p>3. This report contains indications relating to the following items:</p> <p>I. <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II. <input type="checkbox"/> Priority</p> <p>III. <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV. <input type="checkbox"/> Lack of unity of invention</p> <p>V. <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI. <input type="checkbox"/> Certain documents cited</p> <p>VII. <input type="checkbox"/> Certain defects in the international application</p> <p>VIII. <input type="checkbox"/> Certain observations on the international application</p>			
Date of submission of the demand 14.01.2004		Date of completion of this report 29 July 2004 (29.07.2004)	
Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87 A-1200 Vienna Facsimile No. 1/53424/200		Authorized officer GRONAU E. Telephone No. 1/53424/320	

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT--

International application No.

PCT/KR 2003/001303

**I. Basis of the report****1. With regard to the elements of the international application:\***☒ the international application as originally filed☐ the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☐ the claims:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, as amended (together with any statement) under Article 19

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☐ the drawings:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☐ the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.**4. ☐ The amendments have resulted in the cancellation of:**☐ the description, pages \_\_\_\_\_.☐ the claims, Nos. \_\_\_\_\_.☐ the drawings, sheets/fig \_\_\_\_\_.**5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed“ and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/KR 2003/001303

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

I. Statement			
Novelty (N)	Claims	1-20	YES
	Claims	----	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	----	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	----	NO

### Citations and explanations (Rule 70.7)

The following documents have been cited in the Search Report:

D1: US 6419369 B1  
D2: US 2001/0055204 A1  
D3: JP 2002 006314 A  
D4: US 5442522 A  
D5: DE 19844921 A1

Documents D1 to D3 relate to backlight assemblies for liquid crystal display devices and to LCD devices employing such backlight assemblies, comprising a light guide plate with a light incident face, a light reflecting face and a light exiting face. They further comprise a light reflecting member for covering the light incident face so as to form a lamp receiving space, and at least two lamps being spaced apart from each other by a certain distance. The diameters of the lamps are identical. D1 and D3 also disclose a retainer for receiving the light guide plate and the light reflecting member.

The subject matter of independent claims 1 and 11 of the present application differs from this state of the art in that the sum of diameters of the two lamps and the distance between the lamps is longer than the width of the light incident face of the light guide plate. These distinguishing features can be considered to be novel and to include an inventive step.

The feature of claims 5 and 15 are also disclosed in D1 to D3 and can be considered to be novel and to include an inventive step only in combination with the features of claims 1 and 11 to which they refer back.

Document D4 relates to a backlight assembly for LCD devices including a light guide plate formed as a wedge-shaped block. A dual edge-lit device is shown in Fig. 5 having both day and night lamps. As is set out in D4, col.5, line 17-22, the angle of the wedge-shaped block is dependent upon the distance of the lamps from the light incident surface

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International application No.  
PCT/KR 03/01303

## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V (page 1)

of the light guide plate as well as upon the distance between the lamps. The light incident surface of the light guide plate has curved recesses as also has the light guide plate shown in Fig. 6 of D4. Not disclosed in D4 are the features that a sum of diameters of the two lamps and the distance between the lamps is longer than the width of the light incident face of the light guide plate. Although the features of claims 2, 3, 12 and 13 of the application are known per se from D4, they are considered novel and include an inventive step in combination with the features of claims 1 and 11 to which they refer back.

Document D5 relates to an illumination device, e.g. for LCD devices, having a light guide plate with a light incident side and one lamp. The diameter of the lamp is chosen to be equal or greater than the width of the light incident side of the light guide plate to yield a greater light density at the light exiting face of the plate, see col. 4, line 24-28. The light incident side of the light guide plate may have a groove with a V-shape cross section as shown in Fig.3. The main distinguishing feature between the disclosure of D4 and the subject matter of claims 1 and 11 of the application is the use of two or more lamps and their arrangement within the receiving container. This feature is not rendered obvious by D4.

Hence, the requirements of novelty and inventive step are considered to be complied with for all claims 1-20 of the present application.